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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,719	03/22/2004	Carmen Flosbach	FA1170USNA	9219

23906 7590 12/13/2005

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WILMINGTON, DE 19805

EXAMINER
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PURVIS, SUE A

ART UNIT	PAPER NUMBER
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1734

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/805,719

Applicant(s)

FLOSBACH ET AL.

Examiner

Sue A. Purvis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>24 Oct 2005</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 4, 8, 9, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doi et al. (JP 01-202492) in view of Yamane et al. (JP 63-128987).

Regarding claims 1, 8, and 9, Doi discloses a process for the production and use of a transfer film comprising a carrier (backing); a radiation curable transparent coating on the carrier; and an image disposed on the transparent coating. As to the transfer film and method for its manufacture, as set forth in claims 1 and 8, Doi discloses: (1) Providing a carrier (backing foil) layer (English Language Translation (hereinafter, "ELT"), pages 5 and 6); (2) Disposing on the carrier, a layer comprising a transparent radiation-curable resin (ELT, pages 6-11); (3) Disposing on the layer of transparent radiation-curable resin, a patterned image layer (ELT, pages 12-13); As to the method of using the transfer film, as set forth in claim 9, Doi discloses (ELT, pages 17 and 18): (1) Providing a substrate; (2) Disposing the surface of the transfer film opposite the carrier against the substrate; (3) Removing the carrier layer; and (4) Curing the transparent radiation-curable transfer layer. However, Doi teaches the need for a metal layer. It would have been obvious to one having ordinary skill in the art at the time the invention was made that an alternative to the multilayer system in Doi would be to not use a metal layer, instead use a single layer as

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taught by Yamane, because Yamane teaches that it is known that the transfer operation can be achieved without the use of the metal layer.

Regarding claim 2, Doi discloses that the patterned image may comprise colored images formed through the use of ink applied either directly by printing or indirectly, i.e., such as by transfer (ELT, pages 11 and 12).

Regarding claims 4, 11 and 12, Doi discloses that the solid, radiation-curable resin may comprise either epoxy group or vinyl group (methyl methacrylate) functionality (ELT, pages 6-8) and is curable by either UV or electron beam radiation (ELT, page 11).

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Doi in view of Yamane as applied to claims 1 and 2 above, further in view of Wagner et al. (US Patent No. 6,486,903).

Doi, as set forth above, discloses that the pattern layer may be provided by printing. Although they do not specifically disclose that the printing is accomplished by way of ink-jet printing, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize such a printing method in the invention of Doi motivated by the fact that Wagner, also drawn to a process for the production and use of a transfer film comprising a carrier (backing); a radiation curable coating on the carrier; and an image disposed on the transparent coating (abstract; Figures 1-6; column 4, lines 23-42), disclose that the printing of the image may be accomplished by any known method including ink-jet (column 6, lines 50-55).

4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Doi in view of Yamane, as applied to claim 1, further in view of Oshima et al. (US Patent No. 5,427,997).

Doi discloses the use of a radiation-curable protective layer but are silent as to the inclusion of an inorganic filler, as per claim 5, in an amount relative to the resin solids content.

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Nonetheless, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize an inorganic filler in the radiation-curable transparent protective resin of Doi motivated by the fact that Oshima, also drawn to methods for the protection of images utilizing a transferable radiation-curable transparent protective layer (Figure 1; column 4, lines 11-15; column 4, line 45 to column 6, line 29), discloses that the inclusion of an inorganic filler at about 10 wt% of the total resin solids content (column 24, lines 1-11) enables sufficient "film cutting" while maintaining the transparency of the protective film (column 5, lines 28-46).

5. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doi in view of Yamane as applied to claim 1 above, further in view of Shvartsman et al. (US Patent No. 6,245,382).

Doi and Oshima, as combined above, disclose the utilization of a radiation-curable transparent coating which includes an inorganic filler at about 10 wt% of the total resin solids content. Although neither Doi nor Oshima specifically disclose the inclusion of an additional layer of radiation-curable transparent resin applied against the first, as per claim 6, and which has the same resin solids composition as that of the first radiation-curable transparent resin layer, as per claim 7, it would have been obvious to one of ordinary skill in the art at the time of invention to provide the method resulting from the references as combined in section (3), above, with two layers of radiation-curable transparent having the same resin solids composition motivated by the fact that Shvartsman, also drawn to methods for the protection of images utilizing a transferable radiation-curable transparent protective layer, disclose the inclusion of more than one layer of protective coating displays a substantial improvement in protection from solvents, plasticizers, and U.V. radiation (abstract; column 21, line 66 to column 22, line 21).

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6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Doi in view of Yamane as applied to claim 9 above, further in view of Bruns et al. (US Patent No. 4,737,322).

Although Doi et al. is silent as to the utilization of other curing methodologies in place of the radiation curing disclosed, it would have been obvious to one of ordinary skill in the art at the time of invention to substitute thermal curing for the radiation curing of Doi et al. motivated by the fact that Bruns et al., drawn to the curing of transparent resins , teaches that these are conventional and equivalent means for curing "optical;" i.e., transparent, resins (column 5, lines 20-25).

7. Claims 1, 2, 4, 8, 9, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamane et al. '885 (US Patent No. 5,320,885) in view of Doi et al. (JP 01-202492).

Yamane et al. '885 discloses a transfer sheet and transfer operation similar to that set forth in the claims, however, Yamane et al. '885 does not disclose a curable coating composition, instead Yamane utilizes a surface treating agent (12) which can be made of resins. Based on the teachings of Doi, it would have been obvious to one having ordinary skill in the art at the time the invention was made, that an alternative to the agent layer used in Yamane et al. '885 would be a curable coating composition, because they are functionally equivalent alternative expedient and Doi teaches there are certain advantages to the coating used therein which are not seen in Yamane et al. '885.

Regarding claim 2, Yamane et al. '885 teaches printing on the substrate agent and Doi discloses that the patterned image may comprise colored images formed through the use of ink applied either directly by printing or indirectly, i.e., such as by transfer (ELT, pages 11 and 12).

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Regarding claims 4, 11 and 12, Doi discloses that the solid, radiation-curable resin may comprise either epoxy group or vinyl group (methyl methacrylate) functionality (ELT, pages 6-8) and is curable by either UV or electron beam radiation (ELT, page 11).

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamane et al. '885 in view of Doi as applied to claims 1 and 2 above, further in view of Wagner et al.

Yamane et al. '885 in view of Doi, as set forth above, discloses that the pattern layer may be provided by printing. Although they do not specifically disclose that the printing is accomplished by way of ink-jet printing, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize such a printing method in the invention of Yamane et al. '885 in view of Doi motivated by the fact that Wagner, also drawn to a process for the production and use of a transfer film comprising a carrier (backing); a radiation curable coating on the carrier; and an image disposed on the transparent coating (abstract; Figures 1-6; column 4, lines 23-42), disclose that the printing of the image may be accomplished by any known method including ink-jet (column 6, lines 50-55).

9. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamane et al. '885 in view of Doi, as applied to claim 1, further in view of Oshima et al.

Yamane et al. '885 in view of Doi discloses the use of a radiation-curable protective layer but are silent as to the inclusion of an inorganic filler, as per claim 5, in an amount relative to the resin solids content.

Nonetheless, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize an inorganic filler in the radiation-curable transparent protective resin of Yamane et al. '885 in view of Doi motivated by the fact that Oshima, also drawn to methods for the protection of images utilizing a transferable radiation-curable transparent protective layer (Figure 1; column 4, lines 11-15; column 4, line 45 to column 6, line 29), discloses that the inclusion of an inorganic filler at about 10 wt% of the total resin solids

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content (column 24, lines 1-11) enables sufficient "film cutting" while maintaining the transparency of the protective film (column 5, lines 28-46).

10. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamane et al. '885 in view of Doi as applied to claim 1 above, further in view of Shvartsman et al.

Yamane et al. '885 in view of Doi and Oshima, as combined above, disclose the utilization of a radiation-curable transparent coating which includes an inorganic filler at about 10 wt% of the total resin solids content. Although neither Doi nor Oshima specifically disclose the inclusion of an additional layer of radiation-curable transparent resin applied against the first, as per claim 6, and which has the same resin solids composition as that of the first radiation-curable transparent resin layer, as per claim 7, it would have been obvious to one of ordinary skill in the art at the time of invention to provide the method resulting from the references as combined in section (3), above, with two layers of radiation-curable transparent having the same resin solids composition motivated by the fact that Shvartsman, also drawn to methods for the protection of images utilizing a transferable radiation-curable transparent protective layer, disclose the inclusion of more than one layer of protective coating displays a substantial improvement in protection from solvents, plasticizers, and U.V. radiation (abstract; column 21, line 66 to column 22, line 21).

11. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamane et al. '885 in view of Doi as applied to claim 9 above, further in view of Bruns et al.

Although Doi et al. is silent as to the utilization of other curing methodologies in place of the radiation curing disclosed, it would have been obvious to one of ordinary skill in the art at the time of invention to substitute thermal curing for the radiation curing of Doi et al. motivated by the fact that Bruns et al., drawn to the curing of transparent resins ,



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teaches that these are conventional and equivalent means for curing "optical;" i.e., transparent, resins (column 5, lines 20-25).

***Response to Arguments***


12. Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new grounds of rejection.

***Conclusion***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sue A. Purvis whose telephone number is (571) 272-1236. The examiner can normally be reached on Monday through Friday 9am to 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher A. Fiorilla can be reached on (571) 272-1187. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Sue A. Purvis  
Primary Examiner  
Art Unit 1734

SP  
December 12, 2005